

---

# Currents

---

## The Flight from Equity

While 1987 will be remembered as the year of the stock market crash, it will be remembered for other crashes as well. There were three major airline disasters in the United States last year, resulting in 227 deaths. The crash of a Northwest Airlines jet in Detroit in August killed 156 people. It was the first fatal crash of a major domestic air carrier in two years and the worst since 1979 when an American Airlines DC 10 crashed, taking 275 lives. In November the second major crash of 1987 occurred. A Continental Airlines flight out of Denver overturned on takeoff during icy conditions. Then in December a disgruntled former employee of Pacific Southwest Airlines shot the crew on a PSA flight out of Los Angeles, causing the death of all 44 aboard. In addition to the recent spate of crashes, reported near misses were up in 1987. Airline safety was listed by the *Wall Street Journal* as one of the top 10 business stories of the year.

Concern over air traffic safety is nothing new. Airline deregulation, the air traffic controllers' strike, and the subsequent firing of two-thirds of the controllers by President Reagan have kept the issue in the limelight for the better part of a decade. Scheduling delays and service problems have added to public anxiety.

Reregulating the airlines is now at the top of the agenda for some legislators. Critics of deregulation charge that airlines have cut back on maintenance and safety checks to cut costs and to meet the challenges of an increasingly competitive environment. Their clear message is that profits and safety are incompatible, and that deregulation has jeopardized the safety of the flying public. It is apparently of little significance that air flight remains the safest form of long-distance travel, and that airline fatalities per passenger-miles flown have fallen steadily since deregulation. (See Richard McKenzie and William Shughart II, "Deregulation and Air Travel Safety," in this issue.)

In light of these charges—and the still impressive safety record of major airlines—researchers are beginning to explore the question of whether the market offers consumers protection against safety oversights by air carriers. Does the discipline of competition spur airlines to operate safely? The answer depends on the responsiveness of the traveling public to the safety performance of airlines. The argument for government action is far stronger if there is evidence that consumers can be herded blindly onto unsafe aircraft than if consumers are found to be savvy travelers, capable of distinguishing safe from unsafe airlines and making their travel plans accordingly.

In a new study, Mark Mitchell, an economist at the Securities and Exchange Commission, and Michael Maloney, professor of economics at Clemson University, evaluate the stock market effects of airliner crashes. The theory underlying their analysis, known as the theory of reputations or brand names, is that consumers value quality (safety, for example) and are willing to pay a price premium to ensure that they receive it. According to this theory, consumers will take their business elsewhere (or refuse to pay the price premium) if an airline's expected riskiness rises due to a crash; the airline's expected cash flow and equity value will fall accordingly. The stock market reaction immediately following a crash should thus provide a measure of consumers' responsiveness to air safety.

Mitchell and Maloney examine the stock price reaction to 56 fatal airliner crashes in the period 1964 to 1979. The sample is limited to crashes involving U.S. airlines listed (at the time of the crash) on the New York Stock Exchange or the American Stock Exchange. The researchers divide the sample into two groups—crashes caused by pilot error (31 cases as evaluated by the FAA) and crashes in which the carrier was not found to be at fault (25 cases). They do this to isolate crashes in which the airlines are likely to

be at fault, not the aircraft manufacturer, air traffic controllers, or the weather. The assumption is that discerning travelers—and therefore the stock market—will impose sanctions on airlines only for crashes for which they are responsible.

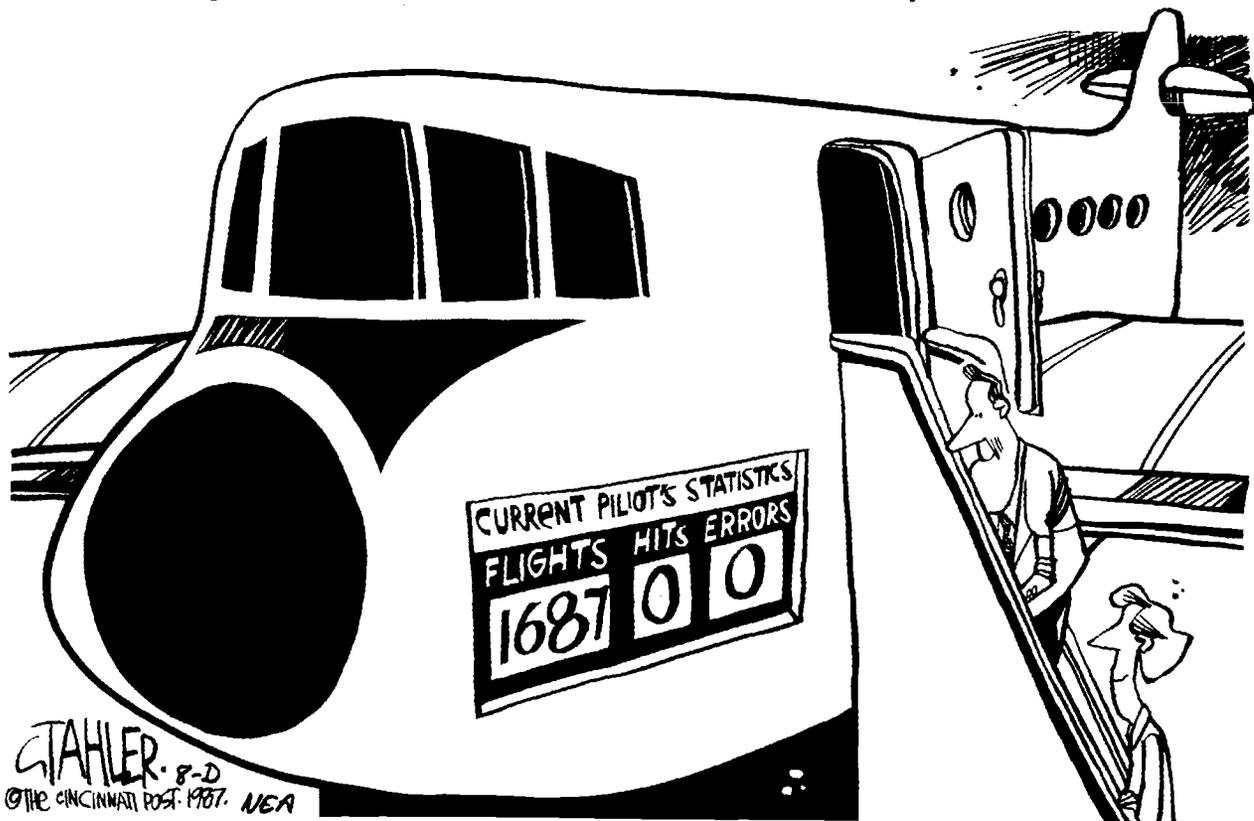
These authors' findings are surprisingly straightforward. The stock market reacted negatively to crashes caused by pilot error: the abnormal stock price decline for an airline averaged 2.4 percent of equity value, or \$7.3 million per crash. There was no stock price reaction to other crashes. Apparently, as the researchers note, the out-of-pocket expenses incurred by the airlines—whether for deaths, loss of plane, or loss of scheduling capacity—were fully, or at least substantially, indemnified by insurers. The abnormal stock market reaction to crashes caused by pilot error is thus attributed to an increase in insurance rates or to a loss of business and consumer goodwill. (If a crash raises the probability of another crash, as evaluated by the insurer, insurance rates will be increased and stock prices depressed. Since losses of business and consumer goodwill are uninsurable, they should lead directly to lower stock prices.)

These results are similar to those reported by other researchers. For example, Andrew Chalk, assistant professor of finance at Southern

Methodist University, has found that aircraft manufacturers at fault in airliner crashes also suffer stock market losses. In a study published in the September, 1987, issue of the *Journal of Industrial Economics*, Chalk examines 76 crashes (involving types of planes still in production at the time of the crashes) in the period 1966 to 1981. He finds that manufacturer-at-fault crashes (19 out of 76) resulted in abnormal stock market declines of 3.8 percent of equity value, or about \$21 million per crash.

In yet another study, published in the *Journal of Transport Economics and Policy* (1987), Donald Chance, associate professor of finance, and Stephen Ferris, assistant professor of finance at Virginia Tech, find a significant negative stock price effect for air carriers, but not for manufacturers. In this study no distinction was made among crashes on the basis of fault. These findings are consistent with those of the two previously cited studies given the relatively low proportion of cases in which manufacturers appear to be at fault.

To determine the extent to which consumer choice sanctions poor safety performance, it is necessary to separate out the stock market effects that are due to increased insurance costs. Mitchell and Maloney estimate that for crashes



Reprinted by permission of the Newspaper Enterprise Association, Inc.

caused by pilot error the increase in the carrier's insurance rates accounts for an average of 34 percent of the total loss in equity value. This leaves a substantial portion attributable to lost business and consumer goodwill. The researchers conclude that consumers can discern airlines with poorer safety records, and are perfectly willing to take their business elsewhere.

The evidence compiled by these researchers suggests that calls for economic reregulation based on the supposed incompatibility of profits and safety are unfounded. Government safety requirements are reinforced, not undermined, by market sanctions against airlines that skimp on safety.

---

## The Minimal Case for the Minimum Wage

Both houses of Congress are expected to debate the federal minimum wage this spring. Joint legislation introduced by Representative Augustus F. Hawkins and Senator Edward M. Kennedy would increase the minimum hourly wage to \$4.65 from \$3.35 over the next three years, and then set it at half the average private-sector hourly wage (which is currently about \$9.00). In arguing for the increase proponents conjure an image of large numbers of workers struggling to earn a "living wage" for themselves and their families. In the words of Senator Kennedy, "the minimum wage is not a living wage and it is not a decent society in which a full-time job means living in poverty."

This New Deal image, though poignant, does not appear to characterize accurately today's labor market. According to a recent study by economists Richard V. Burkhauser and T. Aldrich Finegan of Vanderbilt University, only about 7 percent of all low-wage workers fit the stereotype of a primary breadwinner in a poor family. Most low-wage workers today are second and third wage-earners—usually wives and children—in households well above the poverty line. As a result, most of the benefits of the proposed increase in the minimum wage would wind up in the pockets of families that can not be defined as poor by any conventional standard.

Burkhauser and Finegan present a careful examination of income trends among low-wage workers. (Low-wage workers, defined as people

earning less than half the average private sector wage, are the group targeted by minimum-wage legislation.) Their results are striking.

Among families headed by nonelderly low-wage workers, the proportion who were poor (those with incomes below the poverty line) fell from roughly three-fourths in 1949 to just one-third in 1984. Furthermore, the fraction of low-wage workers who were the primary wage-earners in their families fell from 31 percent in 1949 to 19 percent in 1984. This latter trend, captured in Figure 1, reveals the divergence between the well-being of low-wage workers and the New Deal stereotype. In 1949, 24 percent of low-wage workers headed poor families; today less than 7 percent do.

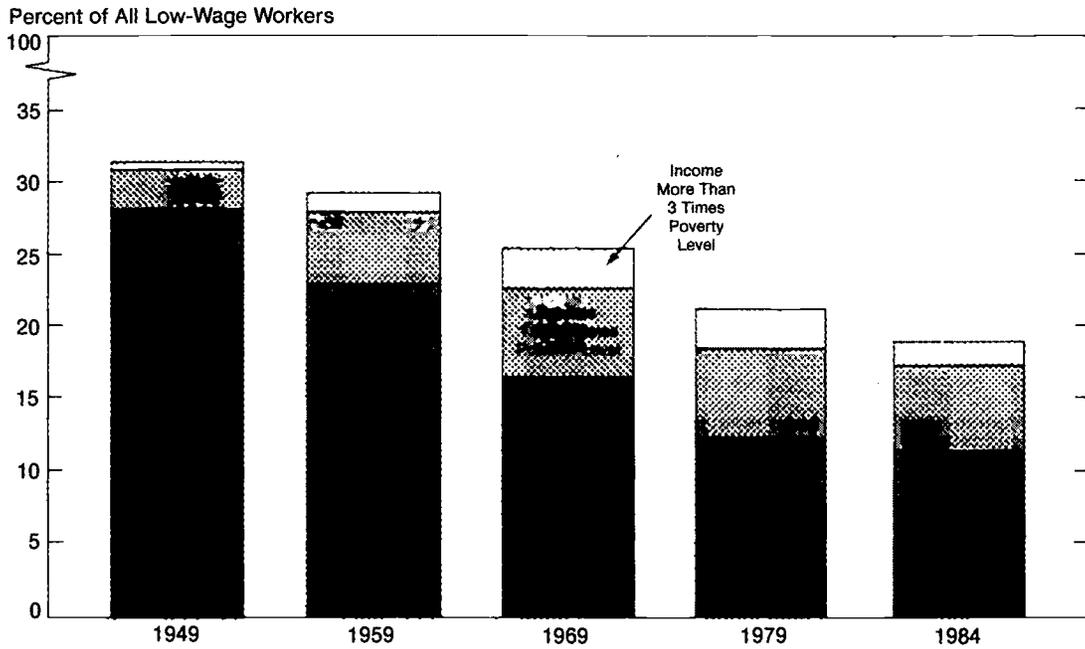
Considering all low-wage workers, not just those heading households, a similar trend is apparent. As illustrated in Figure 2, in 1959 42 percent of low-wage workers were in poor households and another 20 percent were in near-poor households. In 1984 only 18 percent were poor and another 17 percent near-poor. Over the same period the fraction of low-wage workers whose family income was at least three times the poverty level grew from 10 percent to 31 percent.

Clearly low-wage jobs do not make the contribution they once did to the support of poor families. Over the past few decades low-wage jobs have gradually been displaced by government transfer programs, especially means-tested income-maintenance programs.

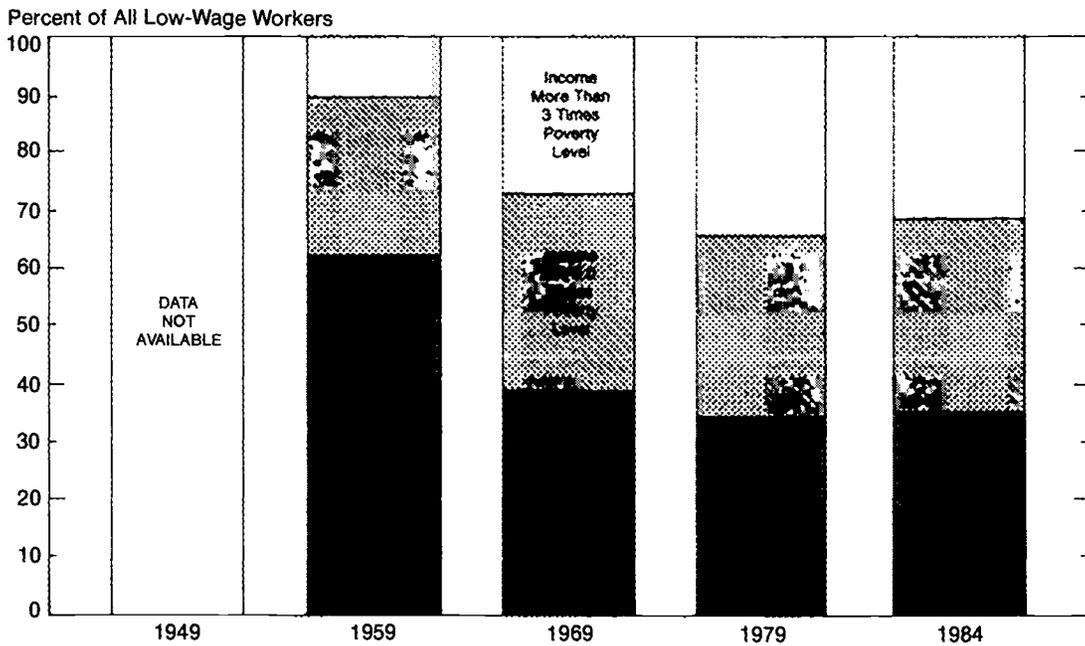
The authors identify two other key factors that have contributed to the transformation in the economic well-being of low-wage workers. One is the economy-wide increase in earnings. From 1949 to 1984 real average annual earnings in the non-farm sector increased by 52 percent. A second factor is the growing prevalence of multiple earners in low-wage families. In contrast to the situation in the 1940s, there are now considerably more low-wage workers living in families with at least two other earners than in families with no other earners. Over three-fourths of today's low-wage jobs are held by spouses, children, and other relatives of family heads.

This latter point highlights the dramatic changes that have taken place in the relationship between low-wage jobs and poverty. In the 1940s most low-wage jobs were held by blacks, rural Southerners, and adults who had never completed high school—many of whom were poor

**Figure 1**  
**LOW-WAGE WORKERS WHO ARE FAMILY HEADS**  
**Classified by Household Income Relative to the Poverty Level**



**Figure 2**  
**ALL LOW-WAGE WORKERS**  
**Classified by Household Income Relative to the Poverty Level**



Source: Derived from U.S. Census data.

and would remain poor for life. Today low-wage jobs are more typically held by people facing temporary constraints, such as school attendance, child care responsibilities, or lack of work experience. The weakening link between low-wage jobs and poverty is most striking among blacks. In 1959 almost two-thirds of blacks with low-wage jobs were poor. In 1984 the proportion was one-third.

The one group for which the link between low-wage jobs and poverty has not been weakening is female heads of households. The poverty rate among low-wage female household heads fell from 75 percent to 37 percent between 1949 and 1969, only to begin to rise again. The rate currently stands near 50 percent.

Burkhauser and Finegan also analyze the beneficiaries of an increase in the minimum wage. Based on 1984 data, they estimate how the earnings gain from a minimum wage set at half the average private sector wage (which would have been \$4.16 an hour in 1984) would have been distributed across households. The researchers estimate that workers who live in poverty would get at most about 11 percent of the gain from an increase in the minimum wage. Workers in families with incomes three or more times the poverty line would get nearly 40 percent. The estimated cost to employers would have been some \$7 billion. (See "In Briefs" for other estimates of the cost.)

Evidently an increase in the minimum wage is an expensive and poorly targeted means of helping the working poor—perhaps even more costly and with fewer benefits than suggested by these estimates. In order to simplify their analysis, Burkhauser and Finegan assumed that a rise in the minimum wage has *no* effect on the employment of low-wage workers, on hours worked, on taxes paid, or on welfare benefits received. They also ignored effects on consumer prices and poverty thresholds. These factors would further reduce the net gains of an increase in the minimum wage.

Proponents of legislation to increase the minimum wage, including many members of Congress and each of the democratic presidential hopefuls, would do well to recognize that the traditional link between low-wage jobs and poverty has been broken in the past 40 years. The minimum wage is now largely symbolic in the effort to help the working poor. Appeals to yesterday's solutions—no matter how emotionally satisfying—can not overcome this reality.

---

## Doubtful Indemnity

Congress is considering legislation to reauthorize and amend the nation's pesticide law, the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The Environmental Protection Agency has requested the repeal of two provisions it finds troublesome: Section 15, which requires the EPA to make indemnity payments to all holders of "suspended" pesticides; and Section 19, which makes the EPA responsible for disposing of these pesticides upon request. These two provisions rarely come into play, but when they do, they can be costly for the agency. The budget-conscious Administration is looking for relief.

When the EPA bans a pesticide identified as hazardous, it generally "cancels" the pesticide's registration and allows any remaining stocks to be used up. (See box.) Only three times in the 15 years since FIFRA was passed has the EPA invoked its emergency powers. Emergency suspension allows the agency to get a pesticide—including existing stocks—off the market quickly, but at a price. The EPA must buy and dispose of all remaining stocks. This can be expensive: the three pesticides suspended to date could end up costing the agency more than \$100 million.

In the last session of Congress the EPA supported legislative proposals to repeal the indemnification and disposal provisions. The case for repeal was spelled out in a study published in November 1987 by the House Committee on Government Operations. According to the study, "the pesticide industry enjoys a federally subsidized insurance policy not afforded other industries." If Congress and the Administration can reach agreement on other aspects of FIFRA, the act is likely to be reauthorized during this session without these two provisions; federal responsibility for compensating owners and disposing of banned products would become a thing of the past.

That could be a serious mistake. These provisions provide important incentives that improve both federal and private decisions. First, by internalizing the costs and benefits of banning a pesticide within the EPA, they provide an effective check against the agency's potential abuse of its emergency suspension authority. Second, they offer a cost-effective means of collecting

and disposing of pesticides that do pose major human health risks. Third, they give the EPA some practical experience in disposing of hazardous waste, and thereby discourage the adoption of totally unrealistic disposal requirements.

As the EPA reviews and reregisters older pesticides, it is sure to identify many that pose "unreasonable" risks. In the majority of cases the EPA can—and should—allow the continued use of inventories. These pesticides were registered originally only after a review of data on acute health effects. The health and environmental risks now being identified are largely associated with chronic, long-term exposure, often under worst-case assumptions, and the short-term exposures usually associated with a "phased" cancellation have little impact. Phased cancellation allows the market to develop new alternatives and to avoid the disruptive effects of sudden emergency suspensions.

Indemnification and disposal costs help deter the EPA from using its emergency suspension authority indiscriminately. Once the EPA is freed of these obligations, emergency suspensions are likely to become more frequent, imposing potentially exorbitant costs on the public, often with questionable corresponding benefits. Suspensions, after all, are quicker than cancellations, and the EPA has shown a strong inclination to succumb to political pressure and declare an emergency (seemingly at the drop of a rat).

The indemnification and disposal provisions do not guarantee sensible policy decisions, of course. The EPA's pesticide office had been conducting a special review of ethylene dibromide (EDB) in 1983, when newly appointed EPA Administrator William Ruckelshaus overruled the office and invoked the emergency suspension authority. Most observers believe this was inappropriate given the miniscule risks involved. Congress had held several hearings on EDB and the new administrator apparently wanted to take strong, decisive action. Taxpayers and consumers have been paying the price ever since.

In those rare cases when a pesticide truly does pose an imminent hazard, federal responsibility for indemnification and disposal may be the best assurance against extended human exposure and risk. When a pesticide is suspended, farmers and other users are likely to hoard their inventories and continue to use the pesticide illegally. Even if they do not use their stocks, they are unlikely to dispose of them properly. It would be prohibitively expensive for the EPA to

## Pesticide-icides

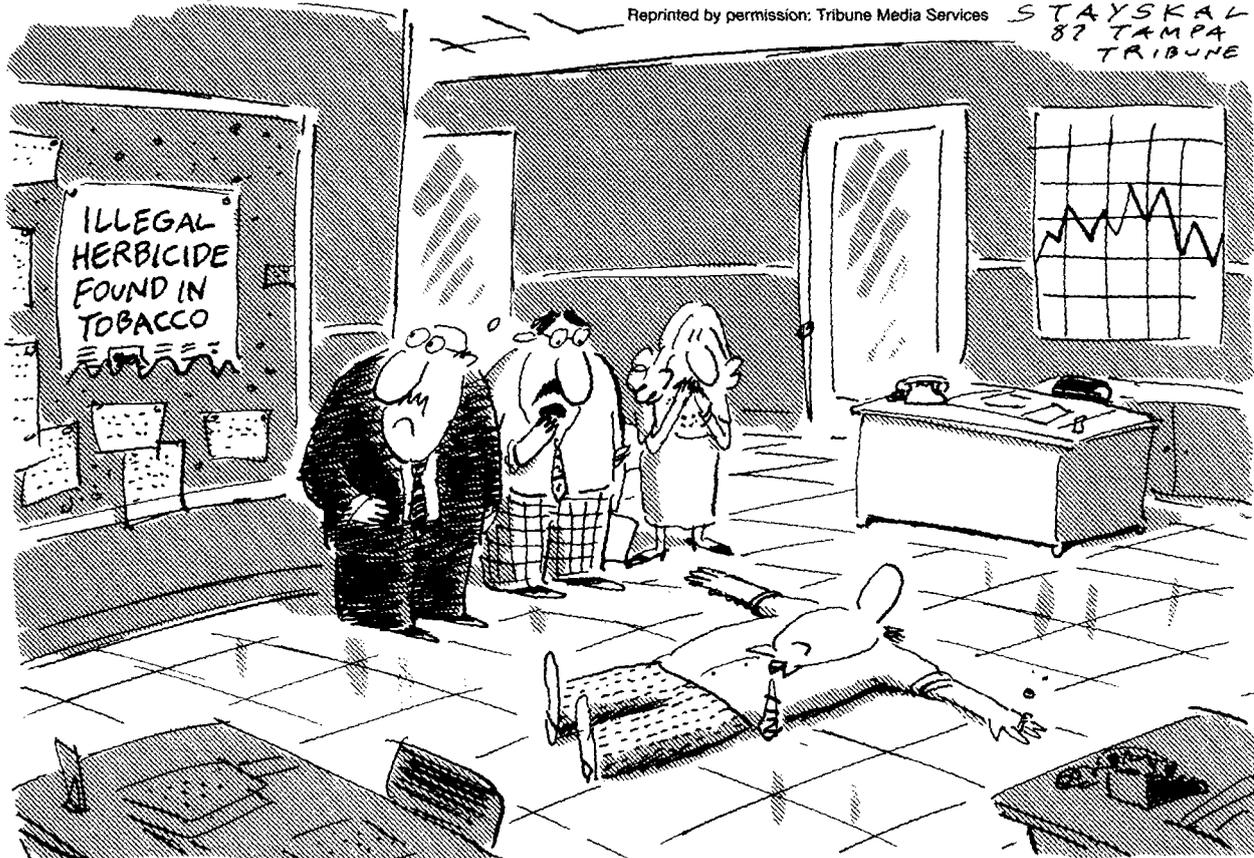
FIFRA requires the EPA to evaluate the risks and benefits of every pesticide. The agency registers new pesticides (or new uses for existing pesticides) only after examining the results of extensive health and environmental testing provided by the manufacturer. Many older pesticides, registered prior to 1972, were never subjected to the barrage of tests for chronic health and environmental effects now demanded. The EPA is gradually "reregistering" these older pesticides by requiring registrants to submit the full gamut of test data.

If, upon reviewing the new data, the EPA suspects that an existing pesticide poses an unacceptable risk, it may proceed to disallow some or all of the registered uses. FIFRA gives the EPA three ways to remove a pesticide from the market.

*Cancellation* is used in the vast majority of cases. In a lengthy notice-and-comment process called *special review*, the EPA examines in detail the pesticide's benefits and potential risks. If it concludes that the pesticide poses "unreasonable adverse effects," the EPA's pesticide office issues a notice of intent to cancel, at which time affected registrants may request a hearing before an administrative law judge. If the judge disagrees with the pesticide office, the administrator may make the final decision to cancel. The entire process takes several years, during which time the pesticide can continue to be produced, sold, and used. Even after a final action canceling a pesticide, any remaining stocks can generally be used. Thus there is no need, and the EPA has no responsibility under FIFRA, to indemnify holders of a canceled product.

*Suspension* is an option the EPA has never used to remove a product from the market. To suspend, rather than cancel, a pesticide's registration, the EPA must find that the pesticide poses an "imminent hazard"—that is, short-term risks of continued use that outweigh any benefits. Upon notice of suspension, registrants can dispute the finding during an expedited hearing. While production of the product would cease, sales and use could continue until the EPA takes final action. At the conclusion of the hearings, the EPA could continue to allow sale and use of remaining stocks. If it prohibits sale or use, however, the agency must indemnify (at market value prior to the suspension) holders of any remaining stocks.

*Emergency suspension* has been used on only three pesticides: 2,4,5,T/Silvex, EDB, and Dinoseb. Like a routine suspension, emergency suspension requires the EPA to find an imminent hazard. In this case, however, the suspension order precedes any hearing and prohibits the sale and use of the pesticide immediately. After taking a final action to ban the product, the EPA must indemnify holders of remaining stocks.



"THEY SAY IT WASN'T SUPPOSE TO HURT ANYBODY... BUT UNFORTUNATELY HIS NAME WAS HERB!"

search every barn in the country, or to test every crop. The most cost-effective method of protecting the public may well be for the EPA to buy up the inventories and supervise their disposal.

This use of indemnification as an enforcement tool is not unique to the EPA. The U.S. Department of Agriculture controls epidemics with a similar approach. Faced with an urgent need to destroy every chicken in southern California, for example, the USDA finds it far cheaper to buy those chickens at the market price than to search for them while desperate farmers try to evade detection.

FIFRA's disposal provision also has beneficial effects on EPA's hazardous waste disposal program. For each of the three pesticides banned to date, the EPA has seriously underestimated the cost and difficulty of disposal. According to the House report, the EPA has already spent almost \$30 million on indemnification and disposal and can expect to spend up to \$134.5 million more. Critics of FIFRA argue that taxpayers should not be footing this multimillion dollar bill and that these costs should be shifted to industry.

Yet industry is in no better position to dispose of the suspended pesticides than the EPA. The agency has demonstrated that it is quite capable of banning virtually every available legal means of disposing of a hazardous waste. The FIFRA provision, along with the Superfund law, give the EPA a taste of the nasty problems this can create, and surely controls its urge to impose prohibitive restrictions on disposal.

Critics of the indemnification and disposal provisions of FIFRA contend that the federal government should not, in the words of the House report, "insure" an industry against "ordinary business risks." In fact, an emergency suspension is not an ordinary business risk. As observers of risk assessment and risk management at the EPA have noted, the process can be arbitrary, political, and irrational. As a result, the potential for an emergency suspension cannot be properly anticipated in manufacturers' product decisions. If some of the costs of emergency suspension are borne by the EPA, there is at least some hope that the costs will be incurred only when necessary.

## In Brief—

### The High Cost of Living Wages.

Richard Burkhauser and T. Aldrich Finegan have estimated that in 1984, since few low-wage workers were in poor households, only 11 percent of the benefits of a hypothetical increase in the minimum wage would have gone to help the poor (see "The Minimal Case for the Minimum Wage," in this issue). Other analyses of the proposed minimum-wage legislation focus on the cost side. Congressman Thomas Petri of Wisconsin has circulated a draft analysis that shows an increase in the total wage bill to employers of \$21 billion annually by 1990, and a net loss of federal revenues of \$2 billion annually. These estimates, based on a static analysis, are consistent with those produced by a more sophisticated dynamic analysis that is circulating in draft form within the Administration. Based on the DRI model, they show the minimum wage legislation increasing the nominal wage bill by \$25 billion in 1990, and causing a net revenue

loss of \$4 billion. The U.S. Chamber of Commerce has used Washington University's long-term macroeconomic model to evaluate the same bill, with similar results. Even from the narrow point of view of the federal budget, the minimum wage is a very costly way to improve the lot of the working poor.

**Caveat Smoker.** Warning! Cigarette labeling may be hazardous to your lawsuit. To date no tobacco company has paid a dime, either in a judgment or in a settlement, to a smoker claiming health injury from cigarettes. Recent rulings by three federal appeals courts have given the industry a powerful shield to help maintain its spotless record. Ironically, that shield is the warning label that anti-smoking advocates have forced upon the industry.

Product liability suits are brought under state and common law. Part of the "crisis" in liability law (and part of the recent impetus for a preemptive federal statute) is the tendency of state legislators, judges, and jurors to be unsympathetic to corporate defendants—

especially those from another state. If juries began exacting damages, both actual and punitive, from tobacco companies, cigarette smoking might soon vanish.

But the warning labels on cigarette packages, required by law since 1965, provide the companies with a robust defense. In the past two years U.S. Courts of Appeals for the First, Third, and Eleventh Circuits have all ruled that compliance with the federal law is adequate warning of the health risks of smoking—at least for people who began smoking after 1965. By requiring warning labels and various other restraints on cigarette advertising, Congress struck a balance between the need to warn smokers about health risks, and the need to allow tobacco to be sold. In so doing it preempted state action to impose stricter requirements. On the news of these rulings tobacco stocks rose sharply.

No tobacco company would have considered warning labels on its own initiative. Yet, as it turns out, the congressionally mandated labels may be doing more to foster tobacco smoking than any strategy a company could have developed.

## Franchising FIFRA

The Federal Insecticide, Fungicide, and Rodenticide Act is a registration statute. Each and every product sold as a pesticide must be registered with the Environmental Protection Agency and must bear a label denoting its permissible uses.

FIFRA is also a benefit-cost balancing statute. This is a rare virtue among environmental laws, which typically set rigid and inefficient standards. But benefit-cost balancing does have pitfalls of its own. A full enquiry into the benefits and costs of any particular economic activity inevitably draws an agency into making judgments that ought to be made by markets, and casts it in the role of central planner—with all the temptations this role suggests. For example, the EPA has been criticized for canceling the registrations of several pesticides without taking into account the risks associated with products that would be substituted for them. This regulatory myopia is a common affliction, especially when products are evaluated one at a time.

Learning from its mistakes, the EPA recently began to experiment with a new approach. Under FIFRA and under the Toxic Substances Control Act, the EPA is attempting to evaluate chemicals in use-related groups. All pesticides that are registered for the control of root nematodes on corn, for example, might be considered together. A moderate level of risk associated with one chemical might be tolerable if the risk (or the cost) of using an alternative is even higher. This practice allows the EPA to write comprehensive benefit-cost analyses that try to account for both opportunity costs and opportunity risks among a group of substitutable pesticides. Although EPA's new approach is logical, it has a major flaw. It tends to degenerate into the BACT (Best Available Control Technology) approach that pervades other EPA programs: select the "best" technology for an economic activity, then require it. The EPA will always be tempted to approve the one pesticide that, considering costs and risks, appears to be optimal for a particular use—and no others.

Unfortunately this could put the EPA into the business of granting government-sanctioned monopolies to pesticide registrants. The process of identifying use groups strongly resembles the process an antitrust analyst would use to define markets. And the pesticide registration process erects formidable barriers to entry around each of these distinct markets. Existing pesticide registrants that survive the EPA's scrutiny may find this a comfortable arrangement.

Further aggravating this problem is the Reagan Administration's proposed "user fee" schedule for pesticide registration. In its quest for revenues the Office of Management and Budget has been urging federal agencies to impose all sorts of user fees, and has come up with some ideas that strain the definition. Regulatory agencies, including the EPA and the Food and Drug Administration, have been urged to seek authority to charge fees for product reviews and registrations. The argument is that these agencies provide companies with a service by reviewing their products to determine safety and efficacy. To enlist support for this idea the OMB has told the agencies they can keep the revenues, violating its longstanding opposition to dedicated funds.

In the case of FIFRA the EPA has offered an interesting proposal. New entrants seeking approval of pesticides would have to pay the EPA the full cost of the agency's review, on the theory that this is a service to the applicant. Taxpayers, on the other hand, would pay most of the cost of reregistering existing pesticides, on the theory that this is a service to the public. The net result would be to increase the economic rents that accrue to existing registrants.

In January 1988 an EPA administrative law judge threw a monkey wrench into this evolving scheme. He ruled that the EPA erred in canceling a registration by failing to include in its benefit-cost analysis a consideration of the damage to competition.

In October 1986 the EPA had proposed to cancel diazanon, a product used to control boring insects on golf courses and sod farms. The agency determined that diazanon was hazardous to some birds, including migrating geese and ducks. In the subsequent hearings the registrant argued that the risks were trivial, while the EPA argued that the benefits were trivial.

The judge refused to dismiss either the risks or the benefits, and ruled that the EPA must balance them, as the statute requires. He found that the agency's existing analysis was flawed in that

it ignored the competitive impact of the cancellation. Noting that diazanon is the low-cost product in its market, he pointed out that users would have to switch to more costly substitutes that would become even more expensive when diazanon was banned. As he stated in his ruling, "The competition afforded by diazanon would be eliminated. Thus, the net effect could be to raise prices for all users."

If that kind of thinking catches on, consumers may have less to fear when it comes to FIFRA and the other health and safety statutes that can get in the way of competitive markets.

---

## Fluffing the Capital Cushion

Banks are changing the way they do business. Under the pressures of changing economic conditions, advancing technology, and costly regulatory constraints, the traditional portfolio lending activities of banks, particularly large money-center banks, are giving way to a host of new activities. In place of making loans, banks are offering financial guarantees, back-up credit lines, forward and options contracts, and swap arrangements. These activities, collectively referred to as "off-balance sheet" activities, have burgeoned over a very short time. Barely in existence 10 years ago, they now represent \$1.5 trillion at U.S. banks alone. At some of our largest banks the value of OBS activities exceeds the value of deposits.

Bank regulators are jittery about the risks posed by the new banking environment. They are particularly concerned about the rapid growth of OBS activities since banks are not required to hold capital against them. A bank's capital—the difference between the value of the bank's assets and liabilities—is a measure of its ability to withstand losses. Currently U.S. banks are required to have at least \$6 of capital for every \$100 of assets on their books. This flat percentage requirement ignores the potential risks posed by OBS activities, just as it has long ignored the differences in risks posed by various conventional assets on the books.

Bank regulators have concluded that capital requirements need updating. In December a committee of central bankers and bank regulators from 12 of the leading industrialized countries issued a joint proposal for uniform capital

regulations for internationally active banks. The objective of the proposal is to establish a closer correlation between required capital and risk. Officials from the U.S. Comptroller of the Currency, the Federal Deposit Insurance Corporation (FDIC), and the Federal Reserve System took part in the development of the risk-based capital framework, which they plan to incorporate into a detailed proposal for all U.S. banks.

Under the proposal a bank's required capital would be based on a regulatory assessment of the riskiness of its activities, both on and off the balance sheet. Items on the asset side of the balance sheet, as well as OBS activities, would be assigned to one of five risk classes. Each of these classes would be subject to a capital requirement between 0 percent and 100 percent of the standard capital requirement, which would be 4 percent for equity capital and 8 percent for total capital. Most regular lending activities would be included in the 100 percent category. Government securities, presumed to be default free, would get a weight of 10 to 25 percent. Among OBS activities, loan guarantees would get a weight of either 100 or 50 percent depending on the terms. Loan commitments, including consumer credit card lines, would get a weight of 10, 25, or 50 percent. Interest rate and foreign exchange related OBS commitments would also be assigned weights depending on regulators' assessments of their risk.

What are the proposed changes intended to accomplish? It is well known that banks may take on more risk than is socially desirable because of the way deposit insurance and other aspects of the financial safety net are structured. Under present arrangements virtually all of the financial rewards for risk taking, but not all of the costs, accrue to bank owners. Regulators argue that the proposed risk-based capital requirements would limit risk taking, and ultimately taxpayers' exposure to losses from bank failures.

Clearly the proposed regulations would make some activities, and some risks, more attractive than others. For example, loans to most private borrowers, whether blue-chip IBM or a Texas wildcatter, would be treated the same and would be subject to the maximum capital requirement. Loans to banks, however, would require less capital, regardless of the financial health of the borrowing bank. Long-term loans to the U.S. Treasury would require even less capital, despite the fact that they can be risky propositions for banks funding them with short-term

deposits. Even municipal debt, which tends to be a mixed lot in terms of credit quality, would receive a favorable risk weighting.

An inherent weakness of the proposal is that it violates one of the best established principles of finance: that risk should be judged in a portfolio context. The activities a bank engages in, both on and off the balance sheet, carry varying degrees of credit, interest rate, liquidity, and foreign exchange rate exposures. Individual exposures can counterbalance one another; indeed, they are explicitly designed to counterbalance one another when a bank hedges interest rate risk with a swap, for example. At the very least risks average out in a well-diversified portfolio. Under the proposal, however, each of a bank's activities, whether on or off the balance sheet, would be weighted *separately* to obtain the required capital ratio. A bank hedging an on-balance sheet position with an OBS position would have to hold capital against both. Since capital is costly, hedging would be discouraged.

The plan also fails to penalize inadequate diversification. Many studies have shown that one of the most important causes of bank failure is excessive concentration of risk—in specific industries, localities, or assets. The item-by-item approach to computing required capital would not provide any disincentives to “plunging,” despite the well-known risks it carries.

Finally, the proposed capital standards are framed in terms of conventional book-value accounting measures. Experience has shown that book-value measures of capital can differ substantially from true economic value and can be manipulated to meet capital standards or preserve the appearance of solvency. In today's highly securitized, trading-oriented banking environment, a bank can change its risk profile and raise the book value of its capital literally overnight. Bankers will no doubt dress up their portfolios when it comes time to measure capital, just as they do now for annual reports to shareholders.

In sum, the new capital requirements would probably not deter banks from excessive risk taking, if they are so inclined. Banks would continue to have ample opportunities to structure their portfolios to achieve whatever balance of risk and return on capital they desire. At the same time the requirements would probably encourage banks to arbitrarily favor some activities over others. Perhaps unwittingly, the proposal could introduce broad forms of credit allocation,

thereby distorting decision making without diminishing the risk of bank failure.

Over the years economists have tried to devise a risk-based premium structure for the FDIC that would obviate the need for capital requirements and extensive regulatory constraints. For a variety of reasons it is unlikely that a truly effective system will ever be put in place by a government agency. The attempt to tinker with risk-based capital requirements is merely the latest effort to deal with the adverse incentives created by deposit insurance.

Regulators are driven to these schemes because government policies have short-circuited market discipline. Fear of financial disaster, or at least embarrassment, has led regulators to offer banks and their customers increasing protection from the consequences of failure. The 1984 bailout of The Continental Illinois National Bank persuaded many that policy makers would not permit a large bank to fail, thus suggesting an implicit federal guarantee of large deposits, foreign deposits, OBS commitments, and other debts of large banks and their holding companies. Since then political pressure for equal treatment of banks of all sizes has led the FDIC to adopt a policy of protecting large depositors and most general creditors whenever possible. As banking firms have expanded their nontra-

ditional products, a broader range of activities and instruments has acquired the implicit protection of the federal safety net. All this has diminished the incentives of financially sophisticated investors to monitor and discipline the practices and balance sheets of banks. Congress and regulators have also chosen to forbear on capital standards, allowing very troubled banks and thrifts to continue operating with little or no economic capital at stake.

Risk-based capital requirements are no substitute for market discipline. If market-value accounting were applied to banks, gains and losses would quickly show up on balance sheets, providing a powerful disincentive to adopting risky strategies. Even exposures from OBS activities could be valued, as demonstrated in a paper presented at the American Enterprise Institute's recent conference on financial restructuring. (George J. Benston and George G. Kaufman, "Risk and Solvency Regulation of Depository Institutions: Past Policies and Current Options.") A policy of promptly reorganizing or closing banks that are insolvent—as measured on a market-value basis—and exposing large depositors and other creditors to potential losses would provide the most effective protection for the stability of the banking system and the FDIC.

### Zeno's Portfolio

Zeno of Elea, in the fifth century B.C., described a paradox that bears repeating. He pointed out that Achilles could never catch a tortoise that had a head start, for by the time he reached the tortoise's starting point the tortoise would have moved on. When Achilles covered this new distance, the tortoise would have another head start, and so on.

Much of the press coverage of the events of October 19 has fallen into this trap. Suppose a certain group of investors have a plan, in the event of a market drop, to begin selling their portfolio in proportion to the drop. The Dow loses 50 points; they sell \$100 million worth of securities. In response to the selling the market drops another 5 points; they sell another \$10 million. The market drops one-half point more; \$1 million more is



sold. Some people at this point recognize a converging geometric series; others simply see an endless downward spiral into chaos.

Many popular descriptions of the market "meltdown" were nothing more than this. The neg-

ative feedback effects, the vicious cycles, and the "free falls" were simply dynamic processes being described in a particularly cumbersome way. Markets may converge quickly to a new equilibrium, but describing the process can take a very long time.

Reprinted by permission of the Newspaper Enterprise Association, Inc.